

Chapter 5: Treatment Recommendations

5 Overview

Critical to the implementation of this Wildland-Urban Interface Wildfire Mitigation Plan will be the identification of, and implementation of, an integrated schedule of treatments targeted at achieving an elimination of the lives lost, and reduction in structures destroyed, infrastructure compromised, and unique ecosystems damaged that serve to sustain the way-of-life and economy of Payette County and the region. Since there are many land management agencies and hundreds of private landowners in Payette County, it is reasonable to expect that differing schedules of adoption will be made and varying degrees of compliance will be observed across all ownerships.

The Federal land management agencies in Payette County, specifically the USDA Forest Service and the Bureau of Land Management, and the state land management agency, the Idaho Department of Lands, are participants in this planning process and have contributed to its development. The Forest Service does not manage any federal property in Payette County. The BLM has management responsibility for all federal land in Payette County. Where available, their schedule of WUI treatments has been summarized in this chapter to better facilitate a correlation between their identified planning efforts and the efforts of Payette County.

5.1 Possible Fire Mitigation Activities

As part of the implementation of fire mitigation activities in Payette County, a variety of management tools may be used. Management tools include but are not limited to the following:

- Homeowner and landowner education
- Building code changes for structures and infrastructure in the WUI
- Homesite defensible zone through fuels modification
- Community defensible zone fuels alteration
- Access improvements
- Access creation
- Emergency response enhancements (training, equipment, locating new fire stations, new fire districts, merging existing districts)
- Regional land management recommendations for private, state, and federal landowners

Maintaining private property rights will continue to be one of the guiding principles of this plan's implementation. Sound risk management is a foundation for all fire management activities. Risks and uncertainties relating to fire management activities must be understood, analyzed, communicated, and managed as they relate to the cost of either doing or not doing an activity. Net gains to the public benefit will be an important component of decisions.

5.2 WUI Safety & Policy

Wildfire mitigation efforts must be supported by a set of policies and regulations at the county level that maintain a solid foundation for safety and consistency. The recommendations enumerated here serve that purpose. Because these items are regulatory in nature, they will not necessarily be accompanied by cost estimates. These recommendations are policy related in

nature and therefore are recommendations to the appropriate elected officials; debate and formulation of alternatives will serve to make these recommendations suitable and appropriate.

As part of the Policy of Payette County in relation to this planning document, this entire **Wildland-Urban Interface Wildfire Mitigation Plan** should be reviewed annually at a special meeting of the Payette County Commissioners, open to the public, where action items, priorities, budgets, and modifications can be made or confirmed. A written review of the plan should be approved by the Chairman of the County Commissioners, detailing plans for the year's activities, and made available to the general public ahead of the meeting (in accord with the Idaho Open Public Meeting Laws). Amendments to the plan should be detailed at this meeting, documented, and attached to the formal plan as an amendment to the WUI Wildfire Mitigation Plan (signatures by the cooperators would be collected at the Chairman's discretion). Re-evaluation of this plan should be made on the 5th anniversary of its acceptance, and every 5-year period following.

Prioritization of activities recommended in this plan should be made by the Payette County Commissioners consistent with the recommendations made in Chapter 1 of this document. During the annual review of this plan, reprioritization can be justified in response to changing conditions and funding opportunities.

5.2.1 Existing Practices That Should Continue

Payette County currently is implementing many projects and activities that, in their absence, could lead to increased wildland fire loss potential. By enumerating some of them here, it is the desire of the authors to point out successful activities.

- Existing rural addressing efforts have aided emergency responses well.
- The current 911 service in the county is an excellent service. Activities that build on the rural addressing and current emergency services to develop an Enhanced 911 service would serve the county well.
- The development and implementation of the County's Comprehensive Growth Plan dove-tails with this planning effort well.

5.2.2 Proposed Activities

Table 5.1. WUI Action Items in Safety and Policy.

Action Item	Goals and Objectives	Responsible Organization	Action Items & Planning Horizon
5.1.a: Amend existing building codes to apply equally to new single housing construction as it does to sub-divisions. Make sure existing policy is comprehensive to wildland fire risks.	Protection of people and structures by applying a standard of road widths, access, and building regulations suitable to insure new homes can be protected while minimizing risks to firefighters. (defensible space, roads and access management, water systems, building codes, signage, and maintenance of private forest and range lands)	County Commissioners in cooperation with Rural Fire Districts and Planning and Zoning.	<ul style="list-style-type: none"> Year 1 debate and adoption of revised code (2004). Review adequacy of changes annually, make changes as needed.
5.1.b: Develop County policy concerning building materials used in high-risk WUI areas on existing structures and new construction	Protection of people and structures by improving the ability of emergency response personnel to respond to threatened homes in high-risk areas.	County Commissioners Office in cooperation with Rural Fire Departments	Year 1 (2004) activity: Consider and develop policy to address construction materials for homes and businesses located in high wildfire risk areas. Specifically, a County policy concerning wooden roofing materials and flammable siding, especially where juxtaposed near heavy wildland fuels.
5.1.c: Develop a formal WUI Advisory Committee to advise County Commissioners on WUI Issues and Treatments	Protection of people and structures by improving the ability of decision makers to make informed decisions about wildfire issues.	County Commissioners Office	Year 1 (2004) activity: Formalize a committee, its membership and service decided on by the County Commissioners, to collaborate on WUI issues within Payette County. Members potentially to include land management organizations and companies, private landowners, and fire protection personnel.
5.1.d: Develop a County Commissioner's Office policy to support the applications for grant monies for projects resulting from recommendations in this plan.	Protection of people and structures by improving the ability of residents and organizations to implement sometimes costly projects.	County Commissioners Office	Ongoing activity: Support grant applications as requested in a manner consistent with applications from residents and organizations in Payette County.
5.1.e: Change the status of Rural Fire Districts from Subscription to taxing district see 5.4.f	Protection of people and structures by improving the funding mechanism and revenue flow for Fire Districts	County Commissioners Office	Year 1 (2004) activity: Consider and adopt policy to change subscription areas of the county to taxing districts.

5.3 People and Structures

The protection of people and structures will be tied together closely as the loss of life in the event of a wildland fire is generally linked to a person who could not, or did not, flee a structure threatened by a wildfire. The other incident is a fire fighter who suffers the loss of life during the combating of a fire. Many of the recommendations in this section will define a set of criteria for implementation while others will be rather specific in extent and application.

Many of the recommendations in this section involve education and increasing awareness of the residents of Payette County. These recommendations stem from a variety of factors including items that became obvious during the analysis of the public surveys, discussions during public meetings, and observations about choices made by residents living in the Wildland-Urban Interface. Over and over, a common theme was present that pointed to a situation of landowners not recognizing risk factors:

- Homeowners in the public mail survey ranked their homesite wildfire risk factors slightly lower than a random sample of home rankings completed by fire mitigation specialists.
- Fire District personnel pointed to numerous examples of inadequate access to homes of people who believe they have adequate ingress.
- Discussions with the general public indicated an awareness of wildland fire risk, but they could not specifically identify risk factors.
- Over half of the respondents to the public mail survey indicated (59%) that they want to participate in educational opportunities focused on the WUI and what they can do to increase their home's chances of surviving a wildfire.

In addition to those items enumerated in Table 5.1, residents and policy makers of Payette County should recognize certain factors that exist today, that in their absence would lead to an increase in the risk factors associated with wildland fires in the WUI of Payette County. These items listed below should be encouraged, acknowledged, and recognized for their contributions to the reduction of wildland fire risks:

- **Livestock Grazing** in and around the communities of Payette County has led to a reduction of many of the fine fuels that would have been found in and around the communities and in the wildlands of Payette County. Domestic livestock not only eat these grasses, forbs, and shrubs, but also trample certain fuels to the ground where decomposition rates may increase. Livestock ranchers tend their stock, placing resource professionals into the forests and rangelands of the area where they may observe ignitions, or potentially risky activities. Livestock grazing in this region should be encouraged into the future as a low cost, positive tool of wildfire mitigation in the Wildland-Urban Interface and in the wildlands.
- **Agriculture** is a significant component of Payette County's economy. Much of the western portion of the county is intermixed with agricultural crops. The original conversion of these lands to agriculture from rangeland, was targeted at the most productive soils and juxtaposition to infrastructure. Many of these productive ecosystems were consequently also at some of the highest risk to wildland fires because biomass accumulations increased in these productive landscapes. The result today, is that much of the rangeland historically prone to frequent fires, has been converted to agriculture, which is at a much lower risk than prior to its conversion. The preservation of a viable agricultural economy in Payette County is integral to the continued management of wildfire risk in this region.

Table 5.2. WUI Action Items for People and Structures.

Action Item	Goals and Objectives	Responsible Organization	Action Items, Planning Horizon and Estimated Costs
5.2.a: Youth and Adult Wildfire Educational Programs	Protect people and structures by increasing awareness of WUI risks, how to recognize risk factors, and how to modify those factors to reduce risk	Cooperative effort including: <ul style="list-style-type: none"> University of Idaho Cooperative Extension Idaho Department of Lands USFS St. Joe National Forest, Coeur d'Alene Tribal, and State and Private Forestry Offices Bureau of Land Management Local School Districts 	To start immediately using existing educational program materials and staffing. Formal needs assessment should be responsibility of University of Idaho Cooperative Extension faculty and include the development of an integrated WUI educational series by year 3 (2006). Costs initially to be funded through existing budgets for these activities to be followed with grant monies to continue the programs as identified in the formal needs assessment.
5.2.b: Wildfire risk assessments of homes in identified communities	Protect people and structures by increasing awareness of specific risk factors of individual homesites in the at-risk landscapes. Only after these are completed can homesite treatments follow.	To be implemented by County Commissioners Office in cooperation with the Rural Fire Departments . Actual work may be completed by Wildfire Mitigation Consultants or trained volunteers.	<ul style="list-style-type: none"> Cost: Approximately \$100 per homesite for inspection, written report, and discussions with the homeowners. There are approximately 20,578 housing units in Payette County, roughly 1,300 (6%) of these structures would benefit from a homesite inspection and budget determination for a total cost estimate of \$130,000. Action Item: Secure funding and contract to complete the inspections during years 1 & 2 (2004-05) Homesite inspection reports and estimated budget for each homesite's treatments will be a requirement to receive funding for treatments through grants.
5.2.c: Homesite WUI Treatments	Protect people, structures, and increase fire fighter safety by reducing the risk factors surrounding homes in the WUI of Payette County	County Commissioners in cooperation with Fire Mitigation Consulting company and Rural Fire Districts <i>Complete concurrently with 5.4.b.</i>	<ul style="list-style-type: none"> Actual funding level will be based on the outcomes of the homesite assessments and cost estimates Estimate that treatments will cost approximately \$750 per homesite for a defensible space of roughly 150'. Approximately 1,300 homes in this category for an estimated cost of \$975,000. Homesite treatments can begin after the securing of funding for the treatments and immediate implementation in 2004 and will continue from year 1 through 5 (2008).

Table 5.2. WUI Action Items for People and Structures.

Action Item	Goals and Objectives	Responsible Organization	Action Items, Planning Horizon and Estimated Costs
5.2.d: Community Defensible Zone WUI Treatments	Protect people, structures, and increase fire fighter safety by reducing the risk factors surrounding high risk communities in the WUI of Payette County	County Commissioners in cooperation with Fire Mitigation Consultants and Rural Fire Districts	<ul style="list-style-type: none"> • Actual funding level will be based on the outcomes of the homesite assessments and cost estimates. • Years 2-5 (2004-08): Treat high risk wildland fuels from homesite defensible space treatments (5.4.c) to an area extending 400 feet to 750 feet beyond home defensible spaces, where steep slopes and high accumulations of risky fuels exist. Should link together home treatment areas. Treatments target high risk concentrations of fuels and not 100% of the area identified. To be completed only after or during the creation of home defensible spaces have been implemented. • Approximate average cost on a per structure basis is \$650-\$800 depending on extent of home defensibility site treatments, for a cost estimate of \$ 942,500.
5.2.e: Maintenance of Homesite WUI Treatments	Protect people, structures, and increase fire fighter safety by reducing the risk factors surrounding homes in the WUI of Payette County	County Commissioners Office in cooperation with Rural Fire Departments and local home owners	<ul style="list-style-type: none"> • Homesite defensibility treatments must be maintained periodically to sustain benefits of the initial treatments. • Each site should be assessed 5 years following initial treatment • Estimated re-inspection cost will be \$50 per homesite on all sites initially treated or recommended for future inspections (\$65,000) • Follow-up inspection reports with treatments as recommended years 5 through 10.
5.2.f: Re-entry of Homesite WUI Treatments	Protect people, structures, and increase fire fighter safety by reducing the risk factors surrounding homes in the WUI of Payette County	County Commissioners Office in cooperation with Rural Fire Departments and local home owners	<ul style="list-style-type: none"> • Re-entry treatments will be needed periodically to maintain the benefits of the initial WUI home treatments. Each re-entry schedule should be based on the initial inspection report recommendations, observations, and changes in local conditions. Generally occurs every 5-10 years.

Table 5.2. WUI Action Items for People and Structures.

Action Item	Goals and Objectives	Responsible Organization	Action Items, Planning Horizon and Estimated Costs
5.2.g: Access Improvements of bridges, cattle guards, and limiting road surfaces	Protection of people, structures, infrastructure, and economy by improving access for residents and fire fighting personnel in the event of a wildfire. Reduces the risk of a road failure that leads to the isolation of people or the limitation of emergency vehicle and personnel access during an emergency.	County Roads and Bridges Department in cooperation with BLM, State of Idaho (Lands and Transportation), and rangeland owners.	<ul style="list-style-type: none"> • Year 1 (2004): Update existing assessment of travel surfaces, bridges, and cattle guards in Payette County as to location. Secure funding for implementation of this project (grants) • Year 2 (2005): Conduct engineering assessment of limiting weight restrictions for all surfaces (e.g., bridge weight load maximums). Estimate cost of \$150,000 which might be shared between County, BLM, State, and private based on landownership associated with road locations. • Year 2 (2005): Post weight restriction signs on all crossings, copy information to rural fire districts and wildland fire protection agencies in affected areas. Estimate cost at roughly \$25-\$30,000 for signs and posting. • Year 3 (2006): Identify limiting road surfaces in need of improvements to support wildland fire fighting vehicles and other emergency equipment. Develop plan for improving limiting surfaces including budgets, timing, and resources to be protected for prioritization of projects (benefit/cost ratio analysis). Create budget based on full assessment.

5.4 Infrastructure

Significant infrastructure refers to the communications, transportation (road and rail networks), energy transport supply systems (gas and power lines), and water supply that service a region or a surrounding area. All of these components are important to Payette County. These networks are by definition a part of the Wildland-Urban Interface in the protection of people, structures, **infrastructure**, and unique ecosystems. Without supporting infrastructure a community's structures may be protected, but the economy and way of life lost. As such, a variety of components will be considered here in terms of management philosophy, potential policy recommendations, and on-the-ground activities.

Communication Infrastructure: This component of the WUI seems to be diversified across the county with multiple source and destination points, and a spread-out support network. Although site specific treatments will impact local networks directly, little needs done to insure the system's viability.

Transportation Infrastructure (road and rail networks): This component if the WUI has some potential limitations in Payette County. The major arterials of Payette County's transportation network are Interstate 84 and US 95. These and other specific infrastructure components have been discussed in this plan.

Potential treatments in reference to the rail lines crossing Payette County will be discussed in a subsequent section.

Ignitions along highways are significant and should be address as part of the implementation of this plan. Various alternatives from herbicides to intensive livestock grazing coupled with mechanical treatments, have been suggested. As part of the multi-agency WUI team proposed in the previous section, these corridors should be further evaluated with alternatives implemented. A variety of approaches will be appropriate depending on the landowner, fuels present, and other factors. These ignitions are substantial and the potential risk of lives to residents in the area is significant.

Many roads in the county have limiting characteristics, such as narrow travel surfaces, sharp turning radii, low load limit bridges and cattle guards, and heavy accumulations of fuels adjacent to the right-of-way. Some of these road surfaces access remote rangeland areas. While their improvements will facilitate access in the case of a wildfire, they are not necessarily the priority for treatments in the county.

Roads that have these inferior characteristics and access homes and businesses are the priority for improvements in the county. Specific recommendations for these roads are enumerated in Table 5.3.

Energy Transport Supply Systems (gas and power lines): (Payette County - Appendix I) A number of power lines crisscross Payette County. Unfortunately, many of these power lines cross over rangeland ecosystems. When fires ignite in these vegetation types, the fires tend to be fast moving, but burn at relatively low to moderate intensities. Additionally, there is a potential for high temperatures and low humidity with high winds to produce enough heat and smoke to threaten power line stability. Most power line corridors have been cleared of vegetation both near the wires and from the ground below. Observations across the county of these high tension power lines lead to the conclusion that current conditions coupled with urban developments have mitigated this potential substantially. It is the recommendation of this Wildfire Mitigation Plan that this situation be evaluated annually and monitored but that treatments not be specifically targeted at this time. The use of these areas as "fire breaks"

should be evaluated further, especially in light of the treatments enumerated in this plan (eg., intensive livestock grazing, mechanical treatments, and herbicide treatments).

Water Supply: In many of Idaho's communities, water is derived from surface flow that is treated and piped to homes and businesses. When wildfires burn a region, they threaten these watersheds by the removal of vegetation and creation of ash and sediment. As such, watersheds should be afforded the highest level of protection from catastrophic wildfire impacts. In Payette County, water is supplied to many homes by single home or multiple home wells. These ground water resources would not be significantly damaged in the event of a wildland fire.

5.4.1 Proposed Activities

Table 5.3. Infrastructure Enhancements.

Action Item	Goals and Objectives	Responsible Organization	Action Items & Planning Horizon
5.3.a: Post FEMA "Emergency Evacuation Route" signs along the identified Primary and secondary access routes in the county.	Protection of people and structures by informing residents and visitors of significant infrastructure in the county that will be maintained in the case of an emergency.	County Commissioners in cooperation with Rural Fire Districts and Roads Department.	<ul style="list-style-type: none"> • Purchase of signs (2004). • Posting roads and make information available to residents of the importance of Emergency Routes
5.3.b: Fuels mitigation of the FEMA "Emergency Evacuation Routes" in the county to insure these routes can be maintained in the case of an emergency.	Protection of people and structures by providing residents and visitors with ingress and egress that can be maintained during an emergency.	County Commissioners in cooperation with Rural Fire Districts and Roads Department.	<ul style="list-style-type: none"> • Full assessment of road defensibility and ownership participation (2004). • Implementation of projects (linked to item 5.3.g, 5.3.h, and 5.3.i.

5.5 Resource and Capability Enhancements

There are a number of resource and capability enhancements identified by the rural and wildland fire fighting districts in Payette County. All of the needs identified by the districts are in line with increasing the ability to respond to emergencies in the WUI and are fully supported by the planning committee.

Specific reoccurring themes of needed resources and capabilities include:

- More water tenders for Rural Fire Districts with drafting capabilities at unimproved sites
- Improved radio capabilities within each district and for mutual aid operations
- Retention and recruitment of volunteers
- Training and development of rural firefighters in structure and wildland fire
- Incorporation of the community of Sand Hollow into current fire districts or the formation of a new district specifically for these residents.

The implementation of each issue will rely on either the isolated efforts of the fire districts or a concerted effort by the county to achieve equitable enhancements across all of the districts. Given historic trends, individual departments competing against neighboring departments for grant monies and equipment will not necessarily achieve county wide equity. However, the West

Central Idaho RC&D may be an organization uniquely suited to work with all of the districts in Payette County and adjacent counties to assist in the prioritization of needs across district and even county lines. Once prioritized, the RC&D is in a position to assist these districts with identifying, competing for, and obtaining grants and equipment to meet these needs.

Table 5.4. WUI Action Items in Fire Fighting Resources and Capabilities.

Action Item	Goals and Objectives	Responsible Organization	Action Items & Planning Horizon
5.4.a: Enhance radio availability in each district, link into existing dispatch, and improve range within the region, update to new digital, narrow band frequency adopted by feds and state.	Protection of people and structures by direct fire fighting capability enhancements.	BLM in cooperation with rural and wildland fire districts and County Commissioners	<ul style="list-style-type: none"> • Year 1 (2004): Summarize existing two-way radio capabilities and limitations. Identify costs to upgrade existing equipment and locate funding opportunities. • Year 2 (2005): Acquire and install upgrades as needed. • Year 2-3 (2005-06): Identify opportunities for radio repeater towers located in the region for multi-county benefits.
5.4.b: Facility, land, business plan and basic supplies for Sand Hollow Fire District.	Protection of people and structures by direct fire fighting capability enhancements.	WCH RC&D in cooperation with Commissioners and fire districts.	<ul style="list-style-type: none"> • Estimate of Costs: <ul style="list-style-type: none"> ◦ \$500,000 • 2 Year Planning Horizon
5.4.c: Retention of Volunteer Fire Fighters	Protection of people and structures by direct fire fighting capability enhancements.	Rural and Wildland Fire Districts working with broad base of county citizenry to identify options, determine plan of action, and implement it.	<ul style="list-style-type: none"> • 5 Year Planning Horizon, extended planning time frame • Target an increased recruitment (+10%) and retention (+20% longevity) of volunteers • Year 1 (2004): Develop incentives program and implement it.
5.4.d: Increased training and capabilities of fire fighters	Protection of people and structures by direct fire fighting capability enhancements.	Rural and Wildland Fire Districts working with the BLM, IDL, and USFS for wildland training opportunities and with the State Fire Marshall's Office for structural fire fighting training.	<ul style="list-style-type: none"> • Year 1 (2004): Develop a multi-county training schedule that extends 2 or 3 years in advance (continuously). • Identify funding and resources needed to carry out training opportunities and sources to acquire. • Year 1 (2004): Begin implementing training opportunities for volunteers.

Table 5.4. WUI Action Items in Fire Fighting Resources and Capabilities.

Action Item	Goals and Objectives	Responsible Organization	Action Items & Planning Horizon
5.4.e: Extension of Facility for Payette Fire District	Protection of people and structures by direct fire fighting capability enhancements.	Payette Rural Fire District.	<ul style="list-style-type: none">• Year 1 (2004): develop cost estimates and secure funding.• 2 Year: Implement expansion to get equipment into cover facility.
5.4.f: Redistricting of Rural Fire Districts	Protection of people and structures by improving response time and capturing the synergies in joint Rural/City operations.	All current Rural Fire Districts, State Fire Marshall, County Commissioners, Fruitland, New Plymouth and Payette cities.	Year 1 (2004): meet with responsible parties to examine feasibility of redistricting. Year 2 (2005) Implement recommendations reached by responsible parties.

5.6 Regional Land Management Recommendations

In section 5.3 of this plan, reference was given to the role that grazing and agriculture have in promoting wildfire mitigation services through active management. Payette County is dominated by wide expanses of rangelands intermixed with communities and rural houses.

Wildfires will continue to ignite and burn fuels and homes depending on the weather conditions and other factors enumerated earlier. However, active land management that modifies fuels, promotes healthy range and forestland conditions, and promotes the use of these natural resources (consumptive and non-consumptive) will insure that these lands have value to society and the local region. We encourage the Bureau of Land Management, the Idaho Department of Lands, Industrial land owners, private land owners, and all other landowners in the region to actively administer their Wildland-Urban Interface lands in a manner consistent with the management of reducing fuels and risks in this zone.

5.6.1.1 Railroad Right-of-Way

There is currently only one active railroad in Payette County. The Payette Branch Northern and Pacific Line hauls forest products, agricultural materials, chemicals, and other products from Emmett to Payette. There are a few curves where a train may be prone to create sparks or eject hot stack carbon, which can easily ignite the light fuels along the railroad corridor. Although there is some potential, this right-of-way has not been a significant source of fire ignitions and is therefore not a priority for fire mitigation treatment in Payette County.